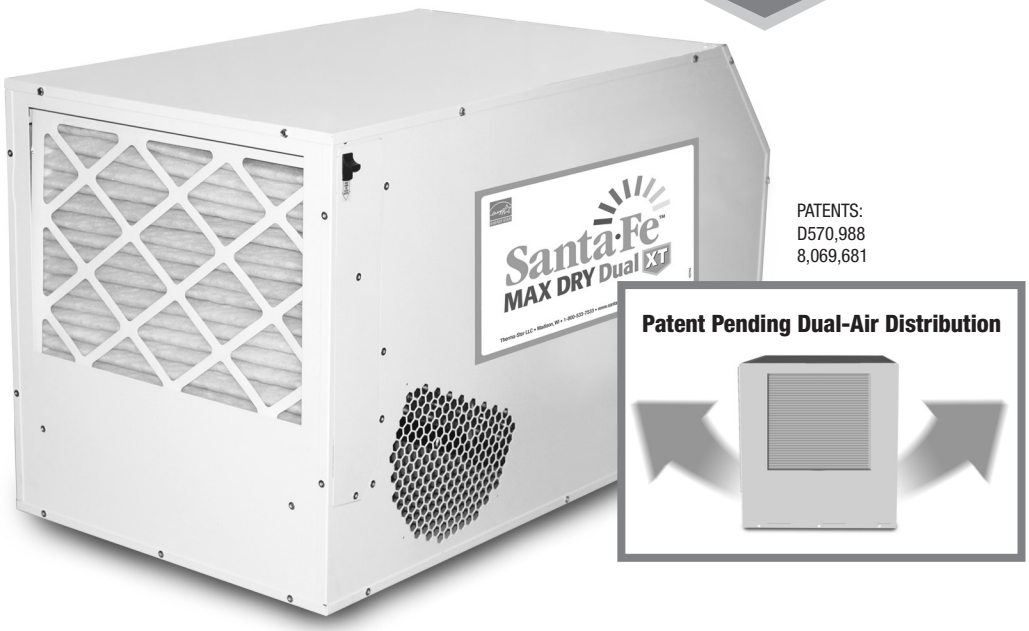
INSTALLER'S & OWNER'S MANUAL

Santa·Fe™
MAX DRY Dual XT



PATENTS:
D570,988
8,069,681

Free-standing Moisture Control for Large Areas

- **High capacity**
- **High efficiency**
- **Environmentally friendly**
- **Patent pending dual-air distribution**

P/N 4031470 • Serial No._____ Install Date:_____

Sold by:

Therma-Stor® LLC
Driven by performance. Powered by design.™

[redacted]

•[redacted]TS-695 11/11

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Precautions

- Do not operate the Santa Fe™ Max Dry Dual XT with a cut or frayed power cord.
- Do not unplug the unit by pulling on the cord. Grasp the plug firmly and pull it out of the wall socket or power receptacle.
- Always use a grounded outlet.
- Never operate electrical equipment near or in standing water.
- Do not stick your fingers or other objects through the safety grill.
- When changing filters, do not stick fingers or other objects in the unit.
- No user serviceable components. Contact installer or call 1-800-533-7533 for all repair or warranty needs.
- Do not restrict airflow in to or out of the unit. This may cause the unit to overheat.
- The unit should never be serviced or cleaned while it is plugged in.
- Do not sit or stand on the unit, or use as a shelf or table.
- Before leaving the unit unattended, ensure children do not have access to the equipment. Do not allow children to play with or near the unit or in its air flow.
- The unit is designed to be installed indoors only.

Read the installation, operation and maintenance instructions carefully before installing and using this unit. Proper adherence to these instructions is essential to obtain maximum benefit from your Santa Fe Max Dry Dual XT dehumidifier.

Read and Save These Instructions

⚠ WARNING! — This symbol means important instructions. Failure to heed them can result in serious injury or death.

⚠ CAUTION! — This symbol means important instructions. Failure to heed them can result in injury or material property damage.

1. Intended Application(s)

The Santa Fe Max Dry Dual XT is intended for use in crawlspaces or basements: however, the unit can be placed in almost any residential setting where dehumidification is desired. Use in non-residential applications and pool areas may void warranty.

The Santa Fe Max Dry Dual XT is designed to operate in temperatures between 56° and 95°F.

In order to efficiently control humidity levels, the area in which the dehumidifier is to be operated must be free of water intrusion or excessive fresh (outside) air infiltration. Before installing the Santa Fe Max Dry Dual XT, water intrusion and air infiltration problems should be addressed.

2. Registrations

The Santa Fe Max Dry Dual XT conforms to UL STD 474.

3. Specifications

Part Number:	4031470
Blower:	391 CFM @ 0.0" WG
	363 CFM @ 0.2" WG
	337 CFM @ 0.4" WG
Power:	920 Watts @ 80°F and 60% RH
Supply Voltage:	115 volt – 1phase – 60 Hz
Current Draw:	8.0 AMPS
Energy Factor:	3.5 L/kWh
Operating Temp.:	56°F Min., 95°F Max.
Sized for:	3600 Sq. Ft. - Typical
Minimum Performance at 80°F and 60% RH	
Water Removal:	155 Pints/Day
Efficiency:	7.3 Pints/kWh
Air Filter:	MERV-11
Size:	16" x 20" x 2"
Power Cord:	10', 110-120 VAC, Ground
Drain Connection:	3/4" Threaded NPT

Dimensions	**Unit**	**Shipping**
Width:	20.25"	24"
Height:	21.75"	28.25"
Length:	38"	42"
Weight:	140 lbs	160 lbs

4. Installation

4.1 Location

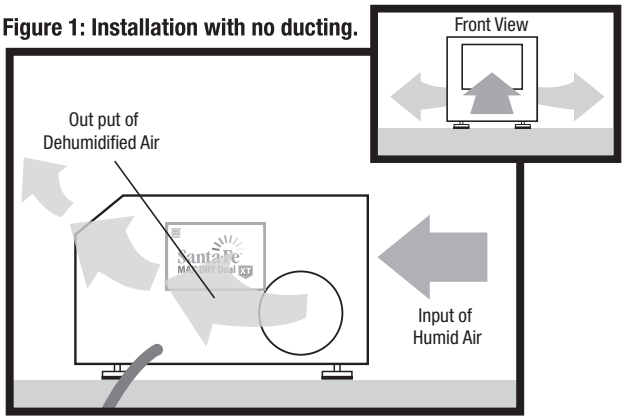
The Santa Fe Max Dry Dual XT can be installed in a variety of locations to meet the owner's needs; other considerations include:

1. Providing access to a 115 VAC power outlet (10' power cord is provided).
2. Locating near a floor or other suitable drain (8' drain hose included).
3. Mount 4" above drain.
4. Do not install the Santa Fe Max Dry Dual XT with the exhaust of the unit within 1' of a wall or obstruction. Do not place the unit near open water.

4.1A No Ducting (fig. 1)

The simplest installation is to place the Santa Fe Max Dry Dual XT with no ducting. To ensure optimal performance, the air inlet and the outlet of the unit must be at least 2' from walls and other obstructions to air flow. Recirculation of outlet air into inlet should be avoided as much as possible.

Figure 1: Installation with no ducting.

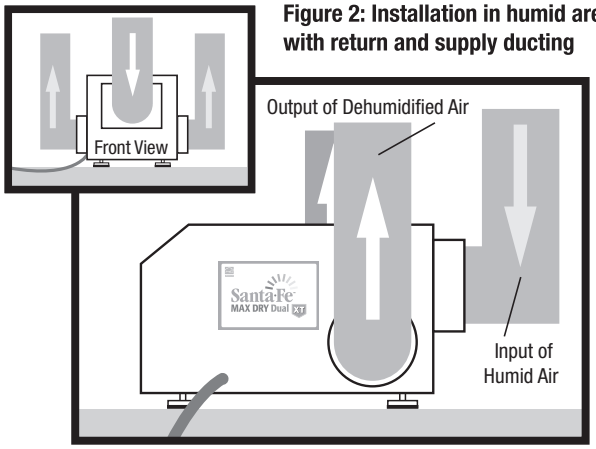


4.1B Ducted Return and Supply (fig. 2)

Dehumidification performance can be modified by adding an return and/or supply duct to circulate air.

For optimal drying, use return duct to draw warm, moist air from near the ceiling.

Figure 2: Installation in humid area with return and supply ducting



4.1C Remote Area, w/ Ducted Supply (fig. 3)

A simplified remote installation method than above uses ducting between the Santa Fe Max Dry Dual XT discharge and the humid room; the Santa Fe Max Dry Dual XT inlet draws air from the room in which it's located. This works well if there is an adequate air flow path between the two rooms; e.g. high door undercut, louvered door or wall grill. This eliminates the need to remote mount the humidity control.

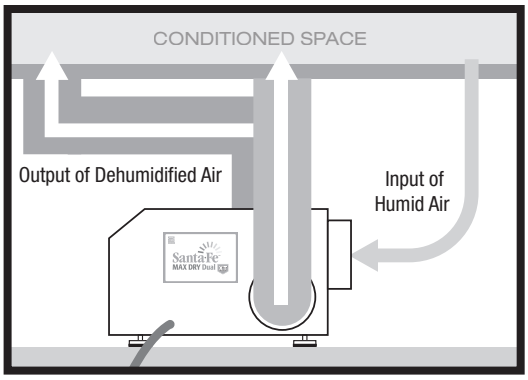
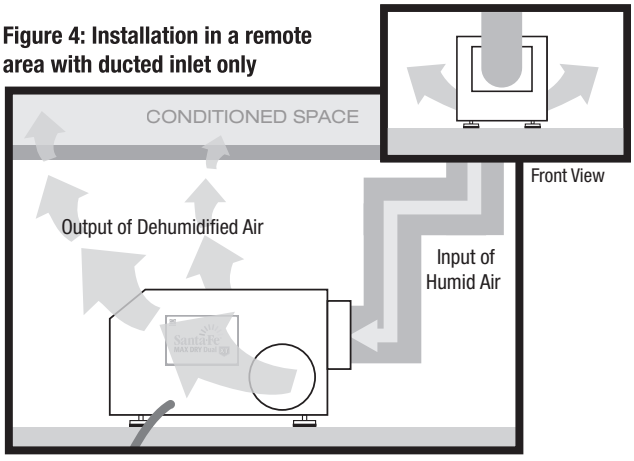


Figure 3: Installation in a remote area with ducted supply only

⚠ WARNING! Before installing the dehumidifier in the manner described in section 4.1D (Fig. 4), call the factory for specific instructions if backdraft devices (i.e. hot waters heaters) are present in the space to be dehumidified.

4.1D In A Remote Area, Ducted Return Only (fig. 4)
When the Santa Fe Max Dry Dual XT is located in a room separate from the main area to be dehumidified, it may be desirable to dehumidify and/or slightly pressurize that room. Pressurization assures that open combustion devices do not backdraft. This can be prevented by installing a duct from the humid room to the Santa Fe Max Dry Dual XT inlet and by allowing the Santa Fe Max Dry Dual XT to discharge dehumidified air into the room in which it's located. An adequate air flow path must exist between the two rooms for this method to work properly.

Figure 4: Installation in a remote area with ducted inlet only



⚠ WARNING!

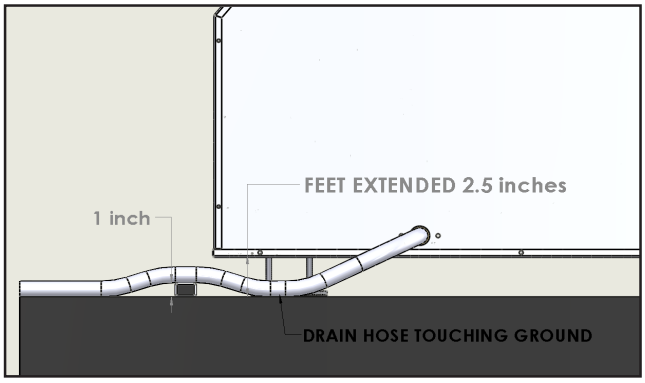
4.2 Electrical Requirements

The Santa Fe Max Dry Dual XT plugs into a common grounded outlet on a 110-120 VAC 15-Amp circuit. Use of a ground fault circuit interrupter (GFCI) protected circuit is recommended. The unit should not be used in areas prone to flooding.

⚠ CAUTION! For proper drainage, the unit must be mounted so the drain outlet is at least 4" above the floor drain, and must be fully supported under the base.

4.3 Condensate (Water) Removal
Condensate drains by gravity via the drain port. Use 3/4" male NPT PVC pipe. Route drain to drain. Install a trap if possible. Take care when installing drain pipe to drain port. Use an adjustable wrench to secure the drain port. An optional condensate pump kit (4028614) may be installed if a lift is required to dispose of the condensate. To order call 1-800-533-7533.

When installing the drain hose make sure the feet are extended such that the dehumidifier is 2 1/2" off the ground. Then coil the drain hose under itself or position a spacer to lift the hose 1" off the ground after the hose has touched the ground. This procedure will create a trap that ensures your unit drains correctly. See the diagram below for further visual clarification.



4.4 Remove Compressor Shipping Support

The Santa Fe Max Dry Dual XT uses a compressor to power the refrigeration system. To protect the compressor and refrigeration system during shipping a plastic tie wrap secures it to the units frame. Remove the tie wrap by cutting the tie wrap and pulling from the unit as shown. After removing tie wrap, insert plastic plugs provided into the holes.

⚠ CAUTION! Remove compressor shipping tie from the unit. Failure to remove shipping tie will cause excess vibration to be transmitted to the frame.

5. Ducting

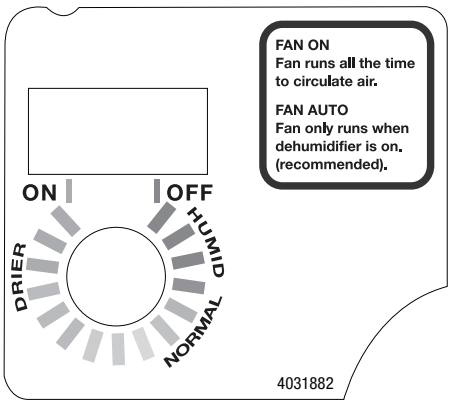
5.1 Supply Duct Kit (P/N 4028607)
A factory designed supply duct kit can be purchased to accept 10" ducting to both outlets of the Santa Fe Max Dry Dual XT. Contact your dealer [redacted]

5.2 Return Duct Kit (P/N 4028610)
A factory designed return duct kit can be purchased to accept 12" ducting. Contact your dealer [redacted]

6. Operation

6.1 Humidity Control Adjustment

The humidity control is an adjustable switch that closes when the relative humidity of the air in which it is located rises to the dial set point. It opens when the RH drops 4 to 6% below the set point.



Approximate Humidity Levels Per Setting

"Dry"	20% to 30% Relative Humidity
"Normal"	50% Relative Humidity (Recommended)
"Humid"	80% to 90% Relative Humidity

The dehumidifier will run until the relative humidity (RH) is reduced to the humidity control dial setting.

Quality humidity meters are available from the factory and are recommended to accurately monitor humidity levels. Refer to the options and accessories table in this document.

6.2 Blower (Fan) Switch

Turning the blower switch to **"FAN ON"** will cause the unit's internal blower to run continuously, whether the unit is dehumidifying or not. This function is desirable if the unit is used for air circulation.

Turning the blower switch to **"FAN AUTO"** will cause the unit's internal blower to run only while the unit is dehumidifying.

7. Maintenance

⚠ WARNING! NOTE: Do not operate the unit without the filter or with a less effective filter. The heat exchange coils inside the unit could become clogged and require disassembly to clean.

7.1 Air Filter

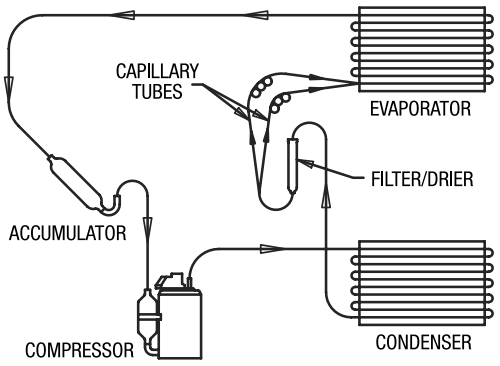
The Santa Fe Max Dry Dual XT ships with a standard MERV 11 efficient pleated fabric filter. This should be checked every six months. The pleated fabric filter can generally be vacuumed clean several times before needing replacement. Operating the unit with a dirty filter will reduce dehumidifier capacity and efficiency and may cause the compressor to cycle on and off unnecessarily. Replacement filters can be ordered from your dealer[redacted]

8. Service

⚠ WARNING! Servicing the Santa Fe Max Dry Dual XT with its high pressure refrigerant system and high voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/or property damage. Only qualified service people should service this unit.

8.1 Technical Description

The Santa Fe Max Dry Dual XT uses a refrigeration system similar to an air conditioner's to remove heat and moisture from incoming air, and add heat to the air that is discharged. Hot, high pressure refrigerant gas is routed from the compressor to the condenser coil. The refrigerant is cooled and condensed by giving up its heat to the air that is about to be discharged from the unit. The refrigerant liquid then passes through a filter/drier and capillary tubing which cause the refrigerant pressure and temperature to drop. It next enters the evaporator coil where it absorbs heat from the incoming air and evaporates.



Santa Fe Max Dry Dual XT refrigeration system

The evaporator operates in a flooded condition, which means that all the evaporator tubes contain liquid refrigerant during normal operation. A flooded evaporator should maintain constant pressure and temperature across the entire coil, from inlet to outlet. The mixture of gas and liquid refrigerant enter the accumulator after leaving the evaporator coil. The accumulator prevents any liquid refrigerant from reaching the compressor. The compressor

evacuates the cool refrigerant gas from the accumulator and compresses it to a high pressure and temperature gas to repeat the process.

8.2 Troubleshooting

FOR THE HOMEOWNER:

■ If the unit does not work properly, please check the following:

— Is the unit unplugged?

— Is power to outlet on? (check switch, if applicable)

— Is circuit breaker tripped?

— Is humidity control set? (turn to "ON")

— Is air flow restricted? (check air filters and grill)

If none of the above, call dealer or 1-800-533-7533.

FOR THE HVAC PROFESSIONAL:

■ No dehumidification. Neither blower, nor compressor run with fan switch AUTO.

1. Unit unplugged or no power to outlet, circuit breaker tripped.
2. Humidity control set to "Humid" setting.
3. Loose connection in internal wiring.
4. Humidity control is defective.

■ No dehumidification. Compressor does not run but blower runs with fan switch AUTO and humidity control turned to ON.

1. Defrost thermostat open, ambient temperature too low.
2. Loose connection in compressor circuit.
3. Defective compressor overload.
4. Defective compressor or compressor run capacitor.

■ Blower runs with fan switch AUTO but compressor cycles on & off.

1. Low ambient temperature and/or humidity causing unit to cycle through defrost mode.
2. Defrost thermostat defective.
3. Defective compressor overload.
4. Defective compressor.

■ Blower does not run with fan switch in either position. Compressor runs briefly but cycles on and off.

1. Loose connection in blower circuit.
2. Obstruction prevents impeller rotation.
3. Defective blower.
4. Defective blower switch.

■ Evaporator coil frosted continuously, low dehumidifying capacity.

1. Dirty air filter or air flow restricted.
2. Defrost thermostat loose or defective.
3. Low refrigerant charge.

[redacted]

9. Service Parts List

Part No	Description
4026221	Leveling Foot
4031085	Condensor Coil
4031086-02	Evaporator Coil E-Coat
4025741	Thermostat, Defrost Control
4029510	Filter/Drier
4032225	Compressor Replacement Kit
4029714	Compressor Overload
4026657	Impeller
4025560	Fan Switch
4021469	Humidistat
4033031-07	Blower Capacitor, Run, 15MFD, 370V
4033032-05	Compressor Capacitor, Run, 45MFD, 370V

10. Accessory/Replacement Parts List

4021475	MERV 11 Filter (16"x20"x2")
4027420	MERV 11 Filters 4-Pack
4027424	MERV 11 Filters 12-Pack
4028614	Pump Kit
4028616	Caster Kit
4028607	Supply Duct Kit (includes two 10" collars)
4026969	10" Flex Duct 25'
4022126	10" Flex Insulated Duct 25'
4028610	Return Duct Kit (includes one 12" collar)
4024750	12" Flex Duct 25'
4028366	12" Flex Insulated Duct 25'
4020175	Remote Dehumidistat

To order, contact your dealer [redacted]

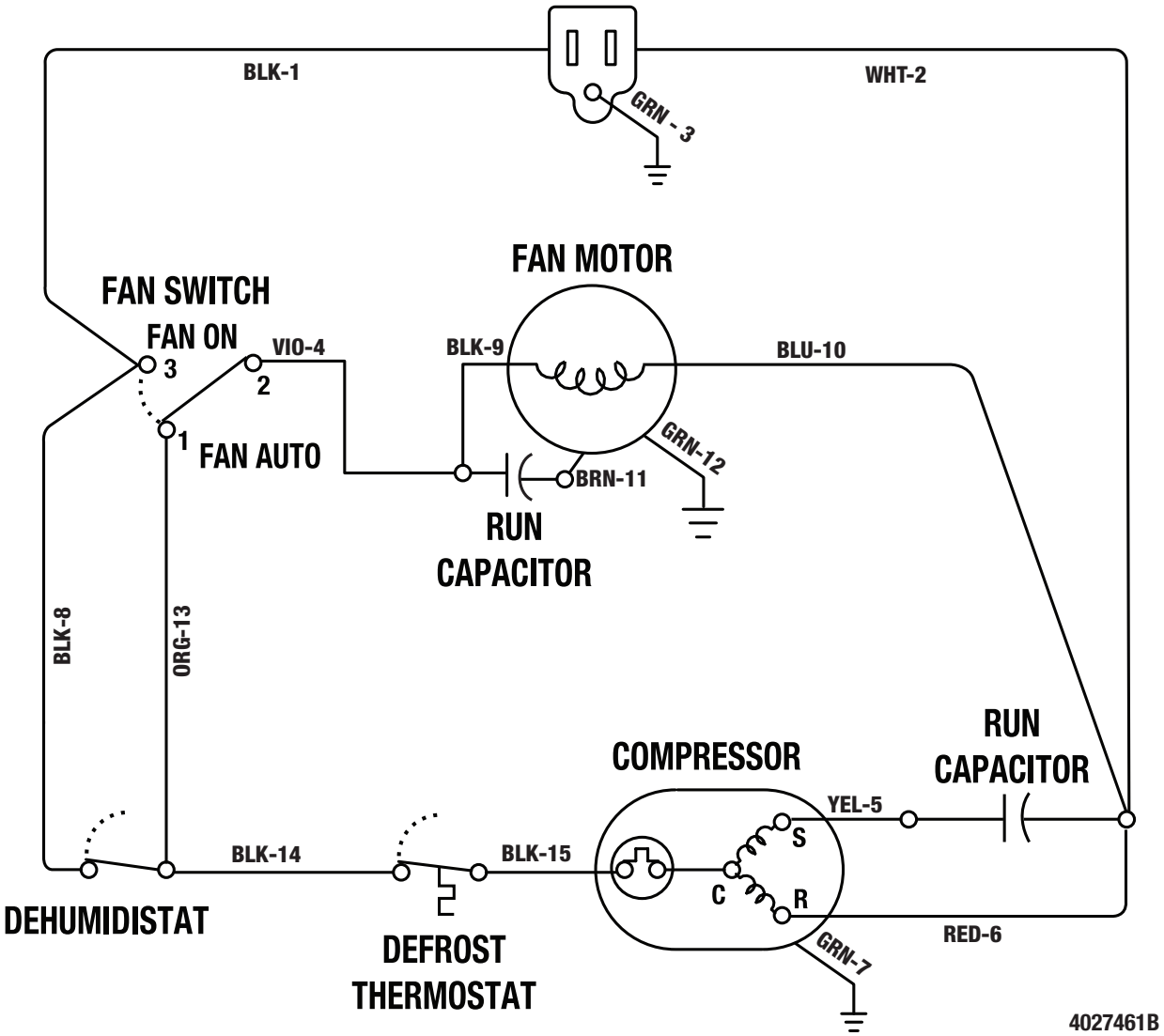
11. Santa Fe Max Dry Dual XT Optional Remote Humidity Control

⚠ CAUTION! This should only be performed by a qualified electrician.

A 120 VAC remote humidity control is available from the factory. This replaces the factory mounted humidity control on the cabinet of the dehumidifier, and allows you to accurately sense the humidity in an area other than the one where the dehumidifier is located.

4020175

12. Wiring Diagram



Santa Fe MAX DRY Dual XT Limited Warranty

Limited Warranty. Therma-Stor, LLC ("Therma-Stor") warrants as follows: (i) the Santa Fe Max Dry Dual XT dehumidifier ("Product") will be free of material defects in workmanship or materials for a period of one (1) year ("One-Year Warranty") following the date of initial purchase of such Product by an original customer purchasing from Therma-Stor or an authorized reseller ("Customer"); and (ii) the Product's condenser, evaporator, and compressor will be free of material defects in workmanship or materials for a period of five (5) years following the date of initial purchase of such Product by a Customer.

Limitation of Remedies. CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THE ABOVE LIMITED WARRANTY AND THERMA-STOR'S ENTIRE LIABILITY THEREUNDER, SHALL BE, AT THE SOLE OPTION OF THERMA-STOR, REPLACEMENT OR REPAIR OF SUCH PRODUCT OR ITS COMPONENTS ("COMPONENTS") BY THERMA-STOR OR THERMA-STOR'S AGENTS ONLY. REFRIGERANT, PIPING, SUPPLIES, TRANSPORTATION COSTS, LABOR COSTS INCURRED IN REPAIR OR REPLACEMENT OF SUCH COMPONENTS ARE NOT INCLUDED. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY AND LIMITED REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE. CUSTOMER ACKNOWLEDGES THAT NO REPRESENTATIVE OF THERMA-STOR OR OF ITS AFFILIATES OR RESELLERS IS AUTHORIZED TO MAKE ANY REPRESENTATION OR WARRANTY ON BEHALF OF THERMA-STOR OR ANY OF ITS AFFILIATES OR RESELLERS THAT IS NOT IN THIS AGREEMENT. Notwithstanding the above, during the term of the One-Year Warranty only, Therma-Stor will provide, free of charge to Customer, all Components and labor (except costs related to removal and installation of Product) required to fulfill its obligations under such One-Year Warranty.

Disclaimer of Warranties. EXCEPT FOR ABOVE LIMITED WARRANTY, WHICH IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED WITH RESPECT TO THE PRODUCT AND ITS COMPONENTS, THERMA-STOR HEREBY DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Warranty Limitations. The foregoing limited warranty extends only to a Customer and shall be null and void upon attempted assignment or transfer. A "defect" under the terms of the limited warranty shall not include problems resulting from Customer's or Customer's employees', agents', invitees' or a third party's misuse, improper installation, improper design of any system in which the Product is included, abuse, lack of normal care, failure to follow written instructions, tampering, improper repair, or freezing, corrosion, acts of nature or other causes not arising out of defects in Therma-Stor's workmanship or material. If a Product or Component is replaced while under warranty, the applicable limited warranty period shall not be extended beyond the original warranty time period. The limited warranty does not cover any costs related to changes to a Product or Component that may be required by any codes, laws, or regulations that may become effective after initial purchase of the Product by Customer.

Customer Responsibilities. As a further condition to obtaining warranty coverage hereunder, the Customer must send a valid warranty claim to Therma-Stor such that Therma-Stor receives such claim prior to the end of the applicable warranty period. Therma-Stor shall have no obligation hereunder with respect to any claim received by Therma-Stor after the expiration of the applicable warranty period. As a further condition to obtaining warranty coverage hereunder, the Customer must present forms of invoices evidencing proof of purchase of a Product. If such invoices do not clearly indicate the date of initial purchase by a Customer, the applicable Product's date of manufacture will be used instead of the date of initial purchase for the purpose of calculating the commencement of the applicable warranty period. Warranty service must be performed by Therma-Stor or a servicer authorized by Therma-Stor. In order to obtain warranty service, the Customer should call Therma-Stor at 1-800-533-7533 and ask for the Therma-Stor Products Service Department, which will then arrange for applicable warranty service. Warranty service will be performed during customary, daytime working hours. If the Product must be shipped for service, Customer shall be solely responsible for properly packaging the Product, for all freight charges, and for all risk of loss associated with shipment.

Limitation of Liability. IN NO EVENT SHALL THERMA-STOR, IN CONNECTION WITH THE DESIGN, SALE, INSTALLATION, USE, REPAIR, REPLACEMENT OR PERFORMANCE OF ANY PRODUCT, COMPONENT, PART THEREOF OR WRITTEN MATERIAL PROVIDED THEREWITH, BE LIABLE, TO THE EXTENT ALLOWED UNDER APPLICABLE LAW, UNDER ANY LEGAL THEORY FOR ANY SPECIAL, DIRECT, INDIRECT, COLLATERAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, THE SOLE AND EXCLUSIVE LIABILITY OF THERMA-STOR, REGARDLESS OF THE NATURE OR THEORY OF THE CLAIM, SHALL UNDER NO CIRCUMSTANCES EXCEED THE PURCHASE PRICE OF THE PRODUCT, COMPONENT OR PART UPON WHICH THE CLAIM IS PREMISED.

Applicable Law and Venue. ANY ARBITRATION, ENFORCEMENT OF AN ARBITRATION OR LITIGATION RELATED TO THE PRODUCT WILL BE BROUGHT EXCLUSIVELY IN DANE COUNTY, WISCONSIN, AND CUSTOMER CONSENTS TO THE JURISDICTION OF THE FEDERAL AND STATE COURTS LOCATED THEREIN, SUBMITS TO THE JURISDICTION THEREOF AND WAIVES THE RIGHT TO CHANGE VENUE. CUSTOMER FURTHER CONSENTS TO THE EXERCISE OF PERSONAL JURISDICTION BY ANY SUCH COURT WITH RESPECT TO ANY SUCH PROCEEDING.

Miscellaneous. If any term or condition of this Limited Warranty is found by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, the same shall not affect the other terms or conditions hereof or thereof or the whole of this Limited Warranty. Any delay or failure by Therma-Stor to exercise any right or remedy will not constitute a waiver of Therma-Stor to thereafter enforce such rights.

Therma-Stor® LLC

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